A NOTE ON DERMOID CYSTS OF THE SCALP AND MID-LINE OF THE BACK.

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At the Pathological Society of London, in 1874, Mr. Henry Arnott exhibited the vault of a skull, taken from a child eight months old, with a tumor of the size of a small walnut situated over the anterior fontanelle. When the child was five weeks old, the tumor exactly resembled a meningocele "rising and falling with regular pulsation, and swelling when the child coughed;" the resemblance was so strong that the tumor was treated as a meningocele. Some weeks after the child was brought to Mr. Arnott it died from bronchopneumonia. The cyst was found to be a dermoid, its walls were lined with skin, furnished with hairs and glands; the contents of the cyst was fluid fat which soon coagulated.[1] The specimen is preserved in the museum of St. Thomas' hospital.

Giraldes[2] has recorded a more remarkable case; A child æt. three months came under his observation with an ovoid tumor of the size of a pigeon's egg, situated over the anterior fontanelle. The tumor was covered with fine white hairs and did not pulsate with respiration. It was regarded as a meningocele, and in order to establish a diagnosis, the tumor was punctured with a fine trocar, and fluid resembling that found in meningoceles was withdrawn. Notwithstanding numerous subsequent punctures, the tumor maintained its original volume. Some months later it was removed, Giraldes being still under the impression that it was a meningocele, but the tumor was found to be a dermoid.

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[1] *Trans. Path. Soc.*, vol. xxv., p. 228.

[2] *Maladies Chir. des Enfants*, p. 342.

The clinical characters of such tumors, situated over the anterior fontanelle, are well illustrated by the case reported and beautifully figured by Mr. Hutchinson.[1] In this case the tumor distinctly filled when the child cried; it was therefore regarded as a meningocele, and not interfered with. (Fig. 1).

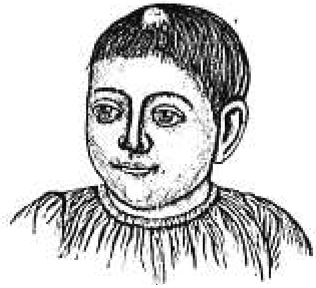

FIG. 1.—A TUMOR (MENINGOCELE) SITUATED OVER THE ANTERIOR FONTANELLE. (*After Hutchinson*).

The patient is now well-grown and approaching 20 years of age.

The Museum of the Middlesex Hospital contains a portion of a human parietal bone, which contains a cyst of the size of a gooseberry, lodged in a depression on its surface; passing from the cyst is a fibrous pedicle connecting it with the dura mater. (Fig. 2). The specimen is described in the catalogue as a sebaceous cyst. As far as my observations go, I have never seen a sebaceous cyst lodged in a depression of the bone, and never one connected with the dura mater. These facts induced me to re-examine the specimen and I found it to be a dermoid, and as far as could be judged from an examination of the fragment of parietal bone preserved with it, the cyst must have been situated in the near neighborhood of the anterior fontanelle. The patient was thoroughly adult.

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[1] *Illustrations of Clinical Surgery*, vol. ii, plate xlvi.

These four specimens indicate the occasional difficulty of deciding accurately, from a clinical point of view, between a meningocele, dermoid, or sebaceous cyst, situated in the mid-line of the cranial vault, especially in infants.

The mid-line of the back, like that of the head, is also famous for the occurrence of congenital tumors, especially in the lower lumbar and sacral regions. Such congenital tumors are spina bifida cysts, congenital sacro-coccygeal tumors, (which now and then project on to the dorsal aspect of the sacrum) lipomata, and as I shall endeavor to show, dermoid cysts. Theoretically, dermoids should occur with tolerable frequency in the middle line of the back, seeing that a line drawn from the external occipital protuberance to the tip of the coccyx, represents the line of coalescence of the medullary folds.

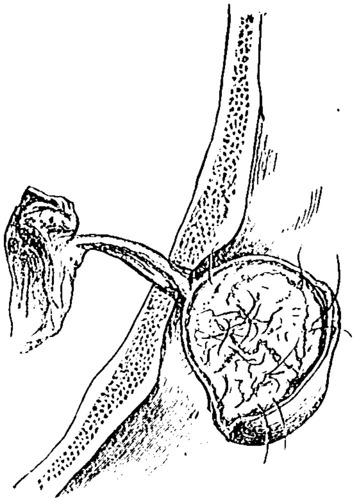

FIG. 2.—A DERMOID TUMOR LODGED IN A DEPRESSION OF THE PARIETAL BONE NEAR THE SITE OF THE ANTERIOR FRONTANELLE. (*Natural Size*).

I have elsewhere shown that situations in the body where epiblastic areas coalesce, are favorite places for dermoid cysts to arise. Regions of coalescence should be divided into two classes: *Primary*, such as those indicating the dorsal fusion of the medullary folds, and the ventral union of the somatopleure layers; and *Secondary*, or those arising from individual modifications, such as the line of union of the scrotum, closure of the mandibular, branchial and palatine fissures. A prolonged inquiry into the subject of dermoids generally, has taught me that such tumors are perhaps more frequent in the lines of secondary fusion, to judge from our present knowledge, than in the lines of primary coalescence; nevertheless there are good grounds for believing that dermoids in the neighborhood of the spines and arches of the vertebræ are occasionally overlooked.

Thinking it possible that many spina bifida cysts have been thus mistaken, I made a careful microscopic examination of the spina bifida preparations in the Museum of the College of Surgeons, Middlesex Hospital, and the specimens in my own stores, but without success.

In the meantime Mr. Gilbret Barling published a brief note of an interesting case; through his kindness I have had an opportuity of examining the specimen and making a composite drawing. (Fig. 3).

The parts are represented in sagittal section and show that in the neighborhood of the lower dorsal and upper lumbar vertebræ of a child, æt. 2 years, there existed a hairfield; no tumor projected posteriorly, but when the spine was bisected a small dermoid cyst occupied a hollow due to defective formation of the vertebral arches. There was in addition dilatation of the central canal of the cord, the cord itself being traversed by a fibrous process of the dura mater, and evidence also of the existence of a supernumerary half-vertebra. The main point for our purpose is that in this case we had a *spina bifida occulta* associated with a dermoid cyst, for as shown in Fig. 3, its walls were beset with stout black hairs.

Dr. Wilde[1] has recently exhibited at the Pathological Society of London, a dermoid cyst as large as a turkey's egg, removed by Mr. Holthouse from the lumbar region of a man, æt. 25 years. The cyst, which had ruptured, was congenital and regarded by the practitioner who first saw the case as a spina bifida, but when admitted into the hospital, hairs were recognized in the contents of the cyst. The arches of the vertebræ underlying the cyst were defective. In addition to the actual occurrence of such cysts there is other evidence to lead us to suspect that dermoids should occur in the region of the spinous processes. It is no uncommon thing to find near the tip of the coccyx, or over the spines of the sacrum, a depression in the skin a few lines deep; sometimes such recesses attain a depth of half an inch and admit a fine probe. They are frequently associated with spina bifida, but many occur in otherwise normal spines. When limited to the neighborhood of the coccyx such recesses are known as post-anal dimples. Cleland[1] has advanced the opinion that such dimples are due to abnormal shortness of the notochord. This explanation is not sufficient to explain the occurrence of these dimples over the sacrum. It is more satisfactory to regard them as slight defects in the coalescence of the superficial portions of the

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[1] The case will be described in detail in *Trans. Path. Soc.*, vol. xi., by Dr. Wilde.

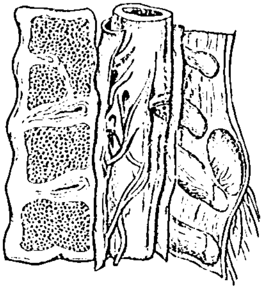

FIG. 3.—PARTS FROM A CASE OF SPINA BIFIDA OCCULTA. SAGITTAL SECTION. A dermoid cyst is associated with the defect.

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[1] *Jour. of Anat. and Physiol.*, vol. xvii., p. 290. This paper contains other references.

medullary folds in the sacro-coccygeal region. They are interesting in connection with our present study, as they suggest the mode by which dermoids arise in the mid-dorsal region.

My object in publishing this short paper is to draw attention to the interest of dermoid cysts occurring in the neighborhood of the vertebral arches, and to hope that details of actual cases may be reported in accessible publications.